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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/579,374

05/12/2006

Peter Nord

OUTT 3475

8229

7812 7590 10/14/2008  
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EXAMINER

KO, STEPHEN K

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

10/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/579,374	NORD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	STEPHEN KO	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/12/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: section headings are missing in the specification.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Appropriate correction is required.

***Claim Objections***

2. Claim 17 is objected to because of the following informalities: claim 17 recites limitation “wherein stripping element is provided with...” (line 1-2 of claim 17) is apparently more clear if written as “wherein the stripping element is provided with ...” Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 12-19 recite limitations (a) “said equipment including at least one element for stripping the deposit (line 3-4 of claim 12) and (b) “wherein the equipment includes at least one stripping element that is turnably movable in the vertical direction” (line 5-7 of claim 1) are confusing since it is unclear whether limitations (a) and (b) are referring to the same structural limitation or separate/different structural limitation. It is treated as different structural limitation for examination purpose. Moreover, in claims 13-14, 17 and 19 recite limitation “stripping element” (line 2 of claim 13, line 2 of claim 14, line 2 of claim 17 and line 2 of claim 19) are also confusing since it is not clear whether the stripping element is referred to structural limitation (a) or structural limitation (b) as both structural limitations (a) and (b) are recognized as stripping element.

Art Unit: 1792

6. Claim 12 recites the limitations "the vertical direction" in line 7 of claim 12 and "the contact with" in line 8 of claim 12. There are insufficient antecedent basis for these limitations in the claim.

7. Claim 14 recites the limitation "around its point of support" in line 3 of claim 14. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 19 recites the limitation "that part" in line 3 of claim 19. There is insufficient antecedent basis for this limitation in the claim. Moreover, it is unclear about which part is reciting. It is assumed to be "in contact with a part of the cathode..." for examination purpose.

9. Claim 22 recites the limitation "in the opposite direction" in line 2-3 of claim 22. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jasberg (US 3,501,795) in view of Kapell et al (US 3,693,236).

Jasberg teaches a cleaning machine for removing deposits from an anode (read as electrode, abstract), wherein the cleaning machine comprises a nozzle (read as at least one element for stripping the deposits, Fig.8, #36, col.4, L.48); a manifold (read as at least one element for controlling the stripping element, Fig.8, #35, col.4, L.47); and a rotatable brush (read as at least one stripping element, Fig.8, #45, col.5, L.2) that is turnably movable in a vertical direction of the anode (Fig.8). Note that the rotatable brush will contact a surface of the anode, where the deposit is located, during cleaning (Jasberg, col.5, L.15-17) and the cleaning machine is fully capable of cleaning cathode.

Jasberg does not teach the cathode can be bent.

However, Kapell et al teach an apparatus for detaching deposits of an master sheet (read as electrode, Fig.1, #5, abstract and col.2, L.16-17) comprising bending rolls (Fig.1, #2 and #2a, col.2, L.22) to bent the master sheet to cause a formed sheet

Art Unit: 1792

(read as deposit, Fig.1, #6, abstract) readily separate from a master sheet (read as electrode, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cleaning machine of Jasberg by utilizing bending rolls with the rotatable brush such that the cathode can be bent as inspired by Kapell to cause the deposit readily separate from the electrode (Kapell et al, abstract)

For claim 13, note that Jasberg teaches the rotatable brush having at least one point of support around the rotatable brush (Jasberg, Fig.8, unlabeled, the center of the rotatable brush).

For claims 14-16, note that Jasberg teaches a control element (Jasberg, Fig.8 and Fig.5, motor #44; chain #46; and a cylindrical core of the brush as a whole, col.5, L.3), which is fully capable to turning the rotatable brush around a point of support.

For claim 17, note that Jasberg teaches that the rotatable brush is a roller (Jasberg, Fig.5, Fig.8 and Fig.12).

For claim 18, note that Jasberg teaches providing hook (Fig.9, #32, col.4, L.32) to receive a header bar (read as the cathode is supported in at least one spot by at least one support element during the removal of the deposit, Jasberg, Fig.9, col.4, L.38-40).

For claim 19, note that Jasberg teaches that the rotatable brush will contact a surface of the electrode, where the deposit is located, during cleaning (Jasberg, col.5, L.15-17).

For claim 20, Jasberg teaches a method for removing deposits from an anode (read as electrode, abstract) comprising the steps of providing a rotatable brush (read

Art Unit: 1792

as at least one stripping element, Fig.8, #45, col.5, L.2) that is controlled by a control element (Jasberg, Fig.8 and Fig.5, motor #44; chain #46; and the cylindrical core of the brush as a whole, col.5, L.3), wherein the rotatable brush is turnably movable in a vertical direction of the anode (Fig.8) and simultaneously contacts the anode for cleaning (col.5, L.14-26).

Jasberg do not teach using the method to remove deposit on cathode. However, since cathode and anode are both electrodes, one skilled in the art would have been found obvious to utilize the method of Jasberg to clean cathode for reasonable expectation of success.

Jasberg does not teach a step of having the cathode being simultaneously touched by the stripping element, so that the cathode is bent, and the deposit is detached.

However, Kapell et al teach a method for detaching deposit from an master sheet (read as electrode, abstract) comprising the step of bending a composite (read as electrode with deposit, abstract) while passing rolls (read as stripping element simultaneously touches the cathode, so that the cathode is bent, Fig.1 or Fig.2, col.2, L.22 or col.2, L.42-43) to cause a formed sheet (read as deposit, abstract) readily separate from a master sheet (read as electrode, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Jasberg by having a step of having the cathode being simultaneously touched by the stripping element, so that the cathode is



Art Unit: 1792

bent, and the deposit is detached as mentioned in Kapell et al to cause the deposit readily separate from the electrode (Kapell et al, abstract).

For claim 21, note that Kapell et al teach the composite is bent only in one direction in its first embodiment (Fig.1).

For claim 21, note that Kapell et al teach the composite is bent first in one direction, and thereafter in the opposite direction in its second embodiment (Fig.2).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN KO whose telephone number is (571)270-3726. The examiner can normally be reached on Monday to Thursday, 7:30am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on 571-272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1792

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SK

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1792